

ATTACHMENT B

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) Anchoring device for stabilising an excavation wall, and to be at least partially engaged into a bore drilled into the excavation wall, said anchoring device comprising:

an elongated ~~support member~~ rigid rod, defining a distal end for engagement into the drilled bore, and a proximal end opposite said distal end and a longitudinal axis extending in between said distal and said proximal end thereof;

a bearing member mounted on said ~~support member~~ rigid rod proximate to said proximal end thereof, for bearing against an exterior surface of the rocky bed; and

an anchoring head mounted on said ~~support member~~ rigid rod and for engagement into the drilled bore of the excavation wall, said anchoring head comprising:

a flexible expansion ~~member mounted on said support member~~ sheath, made from an elastic material and adapted to stretch and radially widen and defining a first end, a second end and an interior cavity engaged by said rigid rod, wherein said cavity defines a first mouth proximate to said first end of said expansion sheath; and

an actuation member defining a longitudinal interior cavity and movably mounted on said rigid rod ~~support member~~, said actuation member mounted for relative movement to said ~~support member~~ rigid rod and to said expansion member ~~sheath~~ and engageable with the latter, said actuation member adapted to exert a pressure on said

expansion member sheath; said actuation member comprising an insertion member movable axially along said rod when the latter is pivoted around its longitudinal axis, said insertion member at least partially engageable into said interior cavity of said expansion sheath by said first mouth, to apply outward pressure on a peripheral surface of said interior cavity of said expansion sheath at least proximate to said first end thereof, to generate stretching and radial expansion of said expansion sheath at least proximate to said first end thereof.

wherein for anchoring said anchoring head into the excavation wall at the level of the bore drilled therein, said actuation member and said expansion member sheath must be moved relative to one another so as to enter into contact with one another, and in such a way as to enable said actuation member to exert a pressure on said expansion member sheath to generate radial expansion of at least one portion of the latter, so that said portion of said expansion member sheath comes to frictionally abut against a part of the internal surface circumscribing the drilled bore in the excavation wall.

2. (Currently Amended) An anchoring device as in claim 1,

wherein said expansion member ~~is an elastic expansion sheath~~ sheath is of cylindroid shape ~~defining a first end and a second end, and an interior cavity engaged by said support member.~~

3. (Canceled)

4. (Currently Amended) An anchoring device as in claim-32,

wherein said elongated rigid rod is at least partly threaded, and wherein said actuation member defines a longitudinal interior cavity having a peripheral wall being also at least partly threaded and threadedly engages said rod, and in that said rod is pivotable around said longitudinal axis to generate a displacement of said actuation member threadingly axially along said rod, to enable relative displacement of said actuation member relative to said expansion sheath.

5. (Canceled)

6. (Currently Amended) An anchoring device as in claim-51, wherein said insertion member is an insertion wedge comprising a frusto-conical portion, said insertion wedge at least partially engageable into said internal cavity of said expansion sheath by said first mouth thereof to generate expansion and radial stretching of said expansion sheath at least proximate to said first end thereof.

7. (Currently Amended) An anchoring device as in claim 6,

further including a retention member mounted ~~stationary~~stationarily onto said rod, said second end of said expansion sheath being abutable against said ~~stationary~~ retention member when said insertion wedge engages into said first mouth of the interior cavity to radially outwardly stretch said expansion sheath.

8. (Original) An anchoring device as in claim 7,

wherein said cavity of said expansion sheath defines a second mouth opposite said first mouth and located proximate to said second end of said expansions mouth, wherein also said retention member comprises a second insertion wedge defining a second frusto-conical portion, said second insertion wedge engageable into said second mouth of said cavity of said expansion mouth when said insertion wedge moves toward said expansion sheath and pushes the latter towards said second insertion wedge.

9. (Currently Amended) An anchoring device as in claim 41,

further including a retention member mounted ~~stationary~~ stationarily on said rod, and wherein said actuation member is a push member movable along said rod and which can push said expansion sheath against said retention member so as to axially compress said expansion sheath and to generate radial expansion thereof.

10. (Original) An anchoring device as in claim 9,

further including a hollow sleeve engaged by said rod and maintained in axially stationary fashion thereon, and defining a main cylindrical portion and a rear annular stopper projecting radially outwardly from one of the ends of said main cylindrical portion, said rear stopper forming said retention member, said main cylindrical portion of said sleeve engaging said interior cavity of said expansion sheath.

11. (Original) An anchoring device as in claim 10,

wherein said push member comprises an expansion shell having a first end portion being annular and hollow and slidingly engaging said main cylindrical portion of said sleeve, so that said expansion sheath can become wedged between said annular end portion of said expansion sheath and said rear stopper of said sleeve, said expansion shell further comprising a number of blades having a toothed exterior surface, said push member further comprising an insertion wedge movably threadingly mounted to said threaded rod and movable toward said expansion shell, both to engage between said blades of said expansion shell and to generate their spreading apart to enable their being applied against the peripheral surface circumscribing the drilled bore in the excavation wall, and to slidingly push said first end portion of said expansion shell along said main cylindrical portion of said sleeve and against said expansion sheath and to generate axial compression of the latter, and consequently the radial expansion thereof to enable its being applied against the peripheral surface circumscribing the drilled bore in the excavation wall.

12. (Original) An anchoring device as in claim 1,

wherein said bearing member is a bearing plate.

13. (Original) An anchoring device as in claim 1,

wherein said rod is provided with at least two anchoring heads to increase the number of anchoring points along the drilled bore in the excavation wall, so that said anchoring device may resist to stronger loads.

14. (Original) An anchoring device as in claim 1,

wherein said expansion sheath comprises at least one elongated band fixedly secured to an exterior surface of said expansion sheath.

15. (Currently Amended) An anchoring device for stabilising an excavation wall from a rocky bed, and to be at least partially engaged into a bore drilled into the excavation wall, said anchoring device comprising:

an adjustable diameter tube, for engagement into the drilled bore in the excavation wall, and having an exterior surface for applying a radially outward pressure on the internal surface of the bore;

a bearing member mounted on said tube proximate to a proximal end thereof, for bearing against an exterior surface of the excavation wall;

an elongated rigid rod which is at least partly threaded, defining a distal end engaged into said tube, and a proximal end opposite said distal end thereof, said rod defining a longitudinal axis extending between said distal and proximal ends thereof; and

an anchoring head mounted on said rod and engaged into said tube, said anchoring head comprising:

a flexible expansion ~~sheath member mounted on said rod, of cylindroid~~ shape, made from an elastic material and adapted to stretch and radially widen and defining a first end, a second end and an interior cavity engaged by said rigid rod.

wherein said cavity defines a first mouth proximate to said first end of said expansion sheath; and

an actuation member defining a longitudinal interior cavity having a peripheral wall being also at least partly threaded and threadedly engaging said rigid rod; said rod being pivotable around said longitudinal axis to generate a displacement of said actuation member threadedly axially along said rod, to enable relative displacement of said actuation member relative to said expansion sheath; said actuation member mounted for relative movement to said rigid rod and to said expansion member and engageable with the latter, said actuation member adapted to exert a pressure on said expansion member; said actuation member comprising an insertion member movable axially along said rod when the rod is pivoted around its longitudinal axis, said insertion member at least partially engageable into said interior cavity of said expansion sheath by said first mouth, to apply radially outward pressure on a peripheral surface of said interior cavity of said expansion sheath at least proximate to said first end thereof, to generate stretching and radial expansion of said expansion sheath at least proximate to said first end thereof;

wherein to bring into operational condition said anchoring device, said rod and said anchoring head must be engaged into said tube, said tube having previously been engaged into the drilled bore of the excavation wall, and then said actuation member and said expansion sheath member must be moved relative to one another for engagement with one another, so as to enable said actuation member to apply a pressure on said expansion member to generate radial expansion of at least a portion of the latter, so that said portion of said expansion member come to apply a radial

pressure against an internal surface of the tube to enable increase of the pressure applied by said external surface of said tube against the internal surface of the bore.

16-18. (Canceled)

19. (New) An anchoring device as in claim 15,

wherein said insertion member is an insertion wedge comprising a frusto-conical position.

20. (New) An anchoring device as in claim 19 further comprises a retention member mounted stationarily onto said rod, said second end of said expansion sheath being abutable against said stationary retention member when said insertion wedge engages into said first mouth of the interior cavity to radially outwardly stretch said expansion sheath.